

Data Sheet LTX-D25.4-FX

1" Convex TPX Lens



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1 General

The convex TPX lenses with a diameter of 1" / 25.4 mm have been developed for the control of THz radiation.

Nomenclature

LTX-D25.4-FX

LTX-D25.4-FX	Type	Lens
LTX-D25.4-FX	Material	TPX
LTX-D25.4-FX	Form	Sphere / Asphere
LTX-D25.4-FX	Diameter	25.4 mm
LTX-D25.4-FX	Focal length	Var

Option:

LTX-D25.4-FX-MX	Mounting	Var
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2 Specification and Application Note

Table 1: Specification and Application Note of TPX lenses

Lens	LTA-D25.4-F10	LTA-D25.4-F15	LTA-D25.4-F25	LTA-D25.4-F32.5	LTA-D25.4-F50	LTA-D25.4-F67	LTS-D25.4-F75	LTS-D25.4-F85	LTS-D25.4-F100	LTS-D25.4-F150	
Specification											
Material	TPX / Polymethylpentene										
Refractive index	1.47										
Form	Asphere					Sphere					
Diameter [mm]	25.4 ± 0.1										
Thickness center [mm]	11.20	10.00	8.00	8.00	7.00	6.94	5.87	5.64	7.00	6.00	
	± 0.05										
Thickness edge [mm]	3.3	2.5	3.1	4.2	4.4	5.0	4.0	4.0	5.6	5.1	
Application Note											
Focal length [mm]	10.0	15.0	25.0	32.5	50.0	67.0	72.0	82.0	95.0	150	
Clear aperture [mm]	20.0	22.4	22.4	22.4	22.4	22.4	22.4	22.4	22.4	22.4	
Aperture angle [°]	39.9	34.1	22.5	17.6	11.9	9.0	8.2	7.3	6.2	4.2	
NA	0.64	0.56	0.38	0.30	0.21	0.16	0.14	0.13	0.11	0.07	
Airy Disc [mm]	0.3 THz	1.46	1.80	2.94	3.84	5.77	7.66	8.09	9.21	10.71	16.65
	1.0 THz	0.44	0.54	0.88	1.15	1.73	2.30	2.43	2.76	3.21	4.99
	3.0 THz	0.15	0.18	0.29	0.38	0.58	0.77	0.81	0.92	1.07	1.66

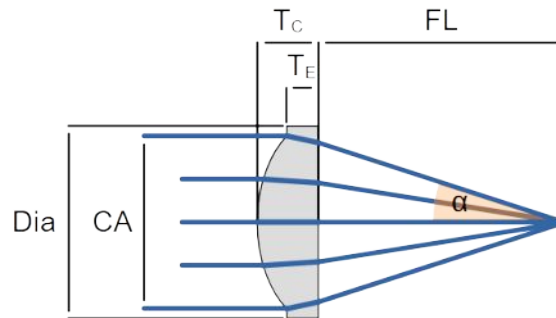


Figure 1: Principal drawing of the convex TPX lens

Dia	Diameter
T _c	Thickness center
T _e	Thickness edge
FL	Focal length
CA	Clear Aperture
α	Aperture angle

3 Mounting Options

The TPX lenses are sold alone by default. But they can be ordered in a lens tube¹ with SM1 thread for easy mounting:

LTX-D25.4-FX-M12.7	12.7 mm lens tube (length without external thread)
LTX-D25.4-FX-M25.4	25.4 mm lens tube (length without external thread)

¹ Outer diameter: 30.5 mm; 1x Internal SM1 thread: 1x External SM1 thread

4 Complementary TPX Lenses

We are offering the following complementary TPX lenses:

LTX-D25.4-FMX	1" Concave TPX Lens
LTX-D50-FX	2" Convex TPX Lens
LTX-D50-FMX	2" Concave TPX Lens

Please check their individual data sheets for further details.

5 Contact Details

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